

REMARKS

Claims 1-36 were presented for examination. Claims 1-4, 11-22 and 29-36 have been rejected. Claims 5-10 and 23-28 have been objected to. By this Response, claims 1-4, 10-12, 19-22 and 29-30 have been amended. New claims 37-40 have been added. Support for the amendments and the new claims is found in the specification as originally filed. No new matter has been added. Reconsideration of this application, as amended, and allowance of all pending claims are hereby respectfully requested.

In section 5 of the Office Action, claim 10 has been objected to for failing to provide a proper antecedent basis for all claim elements. The Applicants have hereby amended claim 10 to cure the problem. Therefore, claim 10, as amended, is now patentable.

In section 7 of the Office Action, the Examiner rejected claims 1-4, 11-12, 19-22, and 29-30 under 35 U.S.C. § 102(b) as being anticipated by Kwon (U.S. Patent No. 5,768,546). The Applicants respectfully traverse the rejection for at least the following reasons.

Kwon discloses method and system for data transport from one system bus to another system bus. That is, the disclosed method and system facilitate data transmission occurring between two system buses that have different data widths (see abstract). Kwon teaches how data of a certain width (e.g., 32-bit width data) from a first system bus that has the same width as the data can be transmitted to a second system bus that has a different width. Kwon's bi-directional data transmission scheme is designed to accommodate the difference in data width of two system buses (column 3, lines 21-25, lines 58-62). That is, Kwon's teaching is for transporting a first data from a first system bus having a first data width to a second system bus so that the data to be transported to the second system bus has a second data width consistent with the data width of the second system bus.

The present invention teaches data transmission method and system for transporting data between data processing devices across a bus in such a manner that improves the utilization efficiency of both the bus having a basic data transmission width and the data processing devices having a basic data processing width different from the basic data transmission width of the bus. A data unit is measured in terms of width or number of data bits. The disclosed data transmission method and system convert M-bit data, which is a basic unit for data processing, to N-bit data, which is a basic unit for data transmission, or vice versa, as recited in claims 1-4, 11-12, 19-22, and 29-30. Kwon does not teach method and system for transmitting data from a data processing device having a basic data processing width, or M-bit data, by converting the M-bit data into data having the basic data transmission width of the bus, or N-bit data, when the data is transported via the bus to another data processing device, as recited in claims 1, 4, 11, 19, 22, and 29. Similarly, Kwon does not teach method and system for receiving data by a data processing device having a basic data processing width, or M-bit, by converting data having the basic data transmission width of the bus, or N-bit data, into M-bit data, when the data is transported via the bus from another data processing device, as recited in claims 2, 3, 12, 20, 21, and 30.

It is well-settled that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Since Kwon fails to disclose and teach those features, as recited in claims 1-4, 11-12, 19-22, and 29-30, the Applicants respectfully submits that Kwon does not anticipate claims 1-4, 11-12, 19-22, 29-30. Thus, claims 1-4, 11-12, 19-22, and 29-30 are patentable. Therefore, the Applicants respectfully request that the rejection of claims 1-4, 11-12, 19-22, and 29-30 under 35 U.S.C. §102(e) be withdrawn.

In section 9 of the Office Action, the Examiner rejected claims 13-18 and 31-36 under 35 U.S.C. § 103(a) as being unpatentable over Kwon as applied to claims 1-4, 11-12, 19-22 and 29-30, and further in view of Sound On Sound “More Bits For Your Bucks”.

According to MPEP §2142, to establish a *prima facie* case of obviousness, there must be some suggestion or motivation to modify the reference or to combine reference teachings. The Examiner correctly pointed out that “Kwon teaches a data transmission method and apparatus for bi-directional transfer of data between two buses with different width.” (see Section 9 of the Office Action) The Examiner further quoted Kwon’s statement “One of ordinary skill in the art can use the teaching of the present invention to other devices requiring bi-directional transfer of data between buses with different data word width.” (Id.) It is clear that Kwon suggests to use his teaching in data transfer between buses having different data widths. There is no motivation and suggestion to use Kwon’s teaching for transmitting data having a data processing width from a data processor to a bus having a different data transmission width or vice versa. Without such required suggestion or motivation, a *prima facie* case of obviousness can not be established. Thus, the Applicants respectfully request that rejection of claims 13-18 and 31-36 under 35 U.S.C. §103 be withdrawn. Therefore, claims 13-18 and 31-36 are patentable.

In Section 10 of the Office Action, claims 5-10 and 23-28 have been objected to as being dependent upon a rejected base claim.

Claim 5-10 depend from claim 1-4. Thus, claims 5-10 are patentable at least for the reasons stated above with respect to claims 1-4 and for the additional features recited therein. Therefore, the Applicants respectfully request that objection of claim 5-10 be withdrawn.

Claim 23-28 depend from claim 19-22. Thus, claims 23-28 are patentable at least for the reasons stated above with respect to claims 19-22 and for the additional features recited therein. Therefore, the Applicants respectfully request that objection of claim 23-28 be withdrawn.

New claim 37 depends from claims 1 or 4. Thus, claims 37 is patentable at least for the reasons stated above with respect to claims 1 or 4 and for the additional features recited therein. Therefore, claim 37 is patentable.

New claim 38 depends from claims 2 or 3. Thus, claims 38 is patentable at least for the reasons stated above with respect to claims 2 or 3 and for the additional features recited therein. Therefore, claim 38 is patentable.

New claim 39 depends from claims 19 or 22. Thus, claims 39 is patentable at least for the reasons stated above with respect to claims 19 or 22 and for the additional features recited therein. Therefore, claim 39 is patentable.

New claim 40 depends from claims 20 or 21. Thus, claims 40 is patentable at least for the reasons stated above with respect to claims 20 or 21 and for the additional features recited therein. Therefore, claim 40 is patentable.

Accordingly, it is believed that all pending claims are now in condition for allowance. Applicant therefore respectfully requests an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicant's representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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